

Shoreland Setbacks and Buffers

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Statutory Objectives

Section 281.31, Wisconsin Statutes provides that shoreland subdivision and zoning regulations shall:

- maintain safe and healthful conditions
- prevent and control water pollution
- protect spawning grounds, fish and aquatic life
- control buildings sites, placement of structures and land use
- reserve shore cover and natural beauty



Setbacks

Chapter NR115 requires setbacks be established:

- to conform to health, safety and welfare requirements
- to preserve natural scenic beauty
- to reduce flood hazards
- to avoid water pollution



Intent of OHWM Setbacks

Provide enough land in the near-shore area to:

- Preserve shore cover
- Protect natural scenic beauty
- Preserve wildlife

Increased setbacks are recommended for bodies of water that possess unique characteristics such as outstanding fish and aquatic life, shore cover, or other ecological attributes.



Trees and Shrubbery Cutting

Chapter NR115 requires tree and shrubbery cutting be regulated:

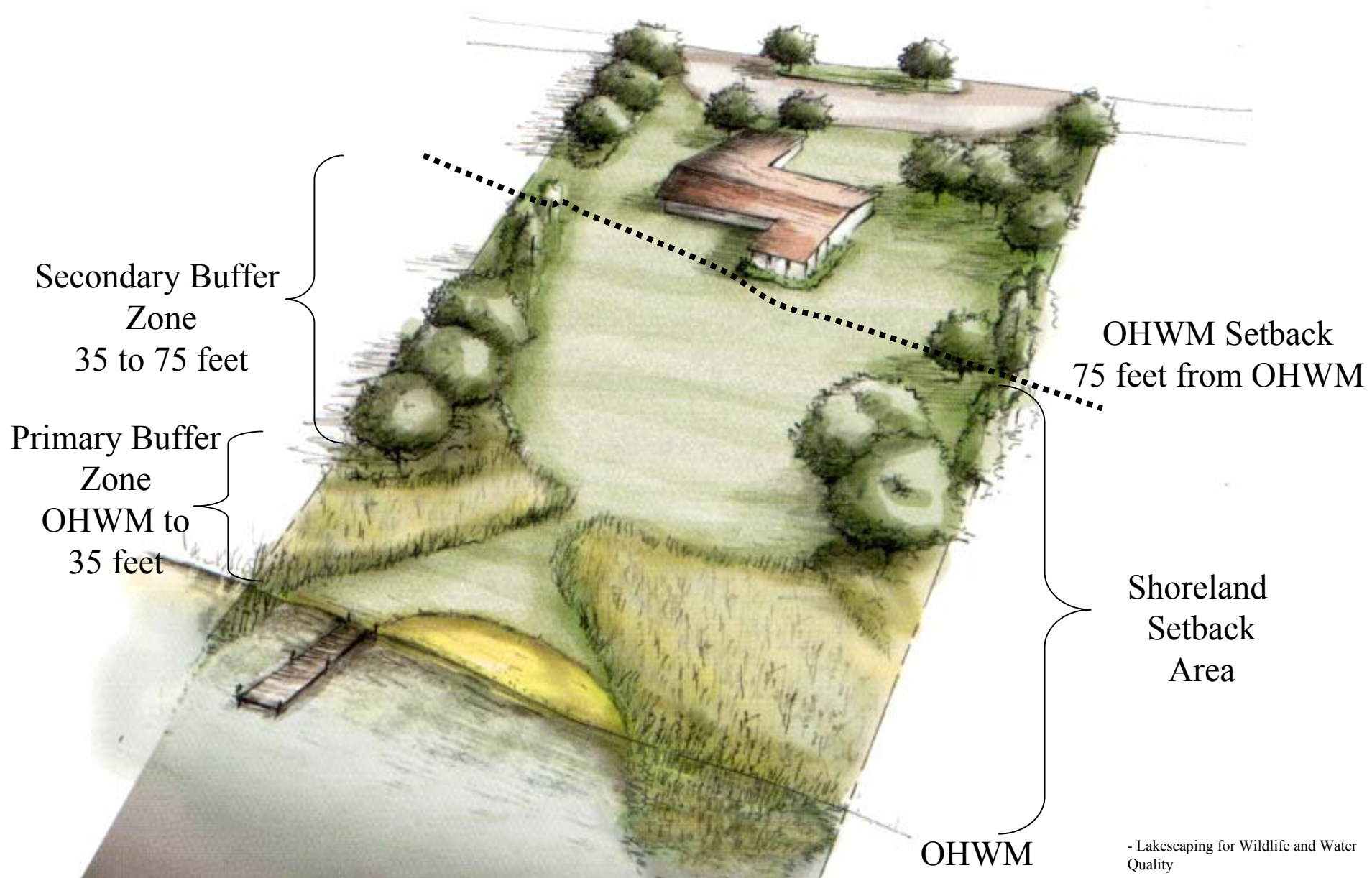
- to protect natural scenic beauty
- to control erosion
- to reduce the flow of effluents, sediments and nutrients from the shoreland area



Intent of Cutting Regulations

- Preserve shore cover
- Protect natural scenic beauty
- Control erosion
- Allow property owner view of water while maintaining a “somewhat natural shoreline”
- “Protection of the view from the water is a chief objective.”
- Note: This provision was the most difficult one to draft.

Current Setbacks and Buffers





OHWM Setbacks

- Currently, unless an existing pattern of development exists, all structures - except, piers, boat hoists and boat houses - must be setback 75 feet from the OHWM of navigable waters
- s.59.692(1v) also allows screened or open-sided structures between 35 and 75 of the OHWM if certain conditions are met, including restoring a buffer



Primary Buffer Zone

- Currently from OHWM to 35 feet inland
- No more than 30 feet in any 100 feet shall be clear-cut
- Intended to be primary provider of buffer functions
 - Offers habitat onshore and in water
 - Filters effluents, sediments and nutrients in runoff
 - Provides visual screening of shoreland development



Secondary Buffer Zone

- Currently from 35 feet to 75 feet inland
- Management governed by the effect on water quality with consideration of sound forestry and soil conservation practices
- Traditionally landscaped area
- Room for heavy machinery during construction and subsequent additions



Secondary Buffer Zone

- May act as a contributor of sediments and nutrients to surface waters
- May also act as a barrier to wildlife movement depending on level of vegetation removal

Problems



OHWM Setbacks

- “Existing pattern of development” is not defined in NR115 and must rely on a Attorney General’s opinion
- Department guidance has allowed limited structures to be exempt from setback requirements - stairways, walkways, and mechanical lifts necessary to access the shore if steep, wet or rocky, and open fences
- Is it appropriate to exempt other structures, and if so, with what conditions?

OHWM Setbacks

- What is a structure?
 - Retaining walls



OHWM Setbacks



- What is a structure?
 - Fuel pumps



OHWM Setbacks

- What is a structure?
 - Signs



Interpretation of Cutting Regulations











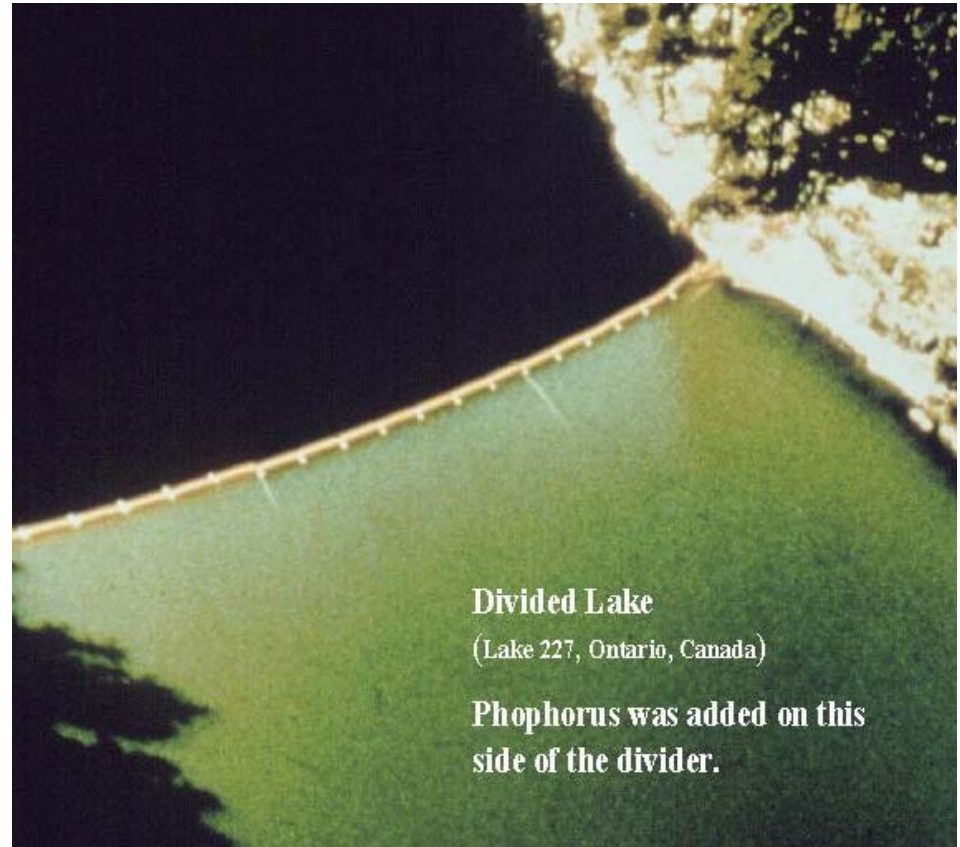
Buffer Depths

- Water Quality
 - For sediment, 15 feet may be effective in short-term, but 100 feet is recommended for long-term protection
 - Buffer depth should be increased on steeper slopes



Buffer Depths

- Water Quality
 - For phosphorus, buffers adequate to control sediment should also control phosphorus, because phosphorus is often bound to sediment or organic matter



Buffer Depths

- Water Quality
 - For nitrogen, 100-foot deep buffer should provide good control, and 50-foot buffers may be adequate under most conditions
 - Wetland preservation is very important because they are areas of high denitrification



Buffer Depths



- Aquatic Habitat
 - 35 to 100 feet of native forested should be preserved or restored
 - Provide stream temperature control, input of woody debris and organic matter for aquatic organisms

Buffer Depths



- Wildlife Habitat
 - Buffers of 100 feet to 300 feet will satisfy the needs of most frogs and turtles



Fischer and Fischenich, 2000.

Buffer Depths



- Wildlife Habitat
 - For birds, buffer depths range from 120 feet to over 1500 feet





Management Guidelines

- Continuous buffers are better than fragmented
- Wider buffers are better than narrower
- Structurally diverse buffers are better than structurally simple
- Native vegetation is better than non-native vegetation in buffers



Questions for Advisory Committee

- Can we clarify the management of the primary and secondary buffers to ensure consistent application of minimum standards statewide?
- Can the primary and secondary buffers be designed to meet the statutory objectives of the program while providing shoreland property owners options that will allow them to more fully enjoy their property?



Management Options

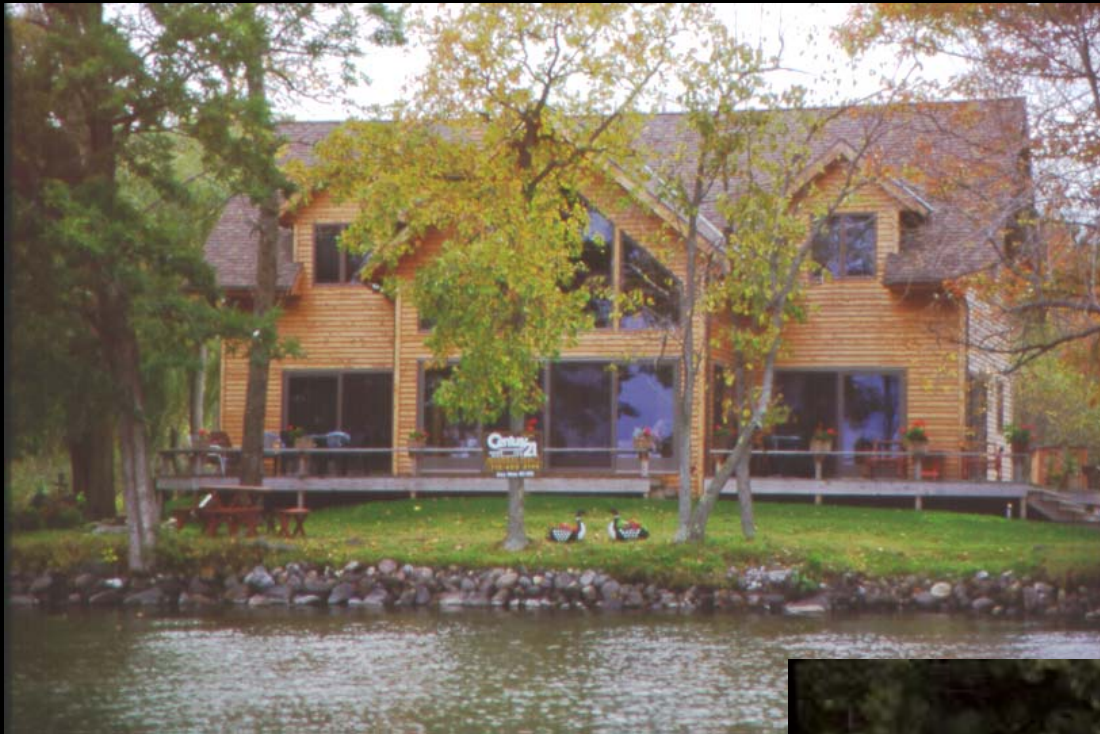
- Depths of primary and secondary buffers, which combined equal the OHWM setback for structures
- Management of primary and secondary buffers
- Exceptions to vegetation management standards
- Viewing and access corridor standards
- Reduced setbacks for principal structures
- Exceptions to setback requirements
- Wetland setbacks and buffers

Things to Consider













Questions?



References

- Fischer, R.A. and J. C. Fischenich. 2000. "Design Recommendations for Riparian Corridors and Vegetated Buffer Strips," *EMRRP Technical Notes Collections* (ERDC TN-EMRRP-SR-24), U.S. Army Engineer Research and Development Center, Vicksburg, MS. <http://www.wes.army.mil/el/emrrp/pdf/sr24.pdf>
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